

Appl. No. : **10/531,951**
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AMENDMENTS TO THE CLAIMS

Please cancel Claims 17 and 18 and add new Claims 29-56, as shown below.

1. (Previously presented) A tire monitoring system comprising:
sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and
a monitor with a monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of each of said tires on the basis of said detected result received by the monitor receiver;
wherein at least either said sensor or said monitor comprises:
a storage unit for storing more than two types of transmission method information for a data communication between said sensor and said monitor; and
switch means for selecting one type of transmission method information from said stored transmission method information and setting a data communication with a transmission method on the basis of the selected transmission method information available,
wherein said transmission method information comprises data transfer bit rate information and transferred data format information.
2. (Original) The tire monitoring system according to claim 1, comprising means for carrying out a data communication by using radio waves between said sensors and said monitor,
wherein said switch means has means for switching frequencies of radio waves used in said data communication.
3. (Original) The tire monitoring system according to claim 1, wherein said transmission method information comprises at least one type of information of communication protocol information, modulation method information, and demodulation method information.
4. (Canceled)
5. (Original) The tire monitoring system according to claim 1, wherein said monitor is provided inside said vehicle.
6. (Original) The tire monitoring system according to claim 1, wherein said sensor comprises means for detecting an air pressure in a tire and sending the detected result.

7. (Previously presented) A monitor receiver in a tire monitoring system comprising:
sensors, each of which is provided for each of the tires equipped to a vehicle and
detects conditions of the tire and wirelessly sends the detected result, and

a monitor with said monitor receiver, which receives the detected result sent from
each of said sensors, for monitoring conditions of said tires on the basis of said detected
result received by the monitor receiver;

wherein said monitor receiver comprises:

a storage unit for storing more than two types of transmission method information
for a data communication with said sensors; and

switch means for selecting one type of transmission method information from said
stored transmission method information and setting a data communication with a
transmission method on the basis of the selected transmission method information
available,

wherein said transmission method information comprises data transfer bit rate
information and transferred data format information.

8. (Original) The monitor receiver in the tire monitoring system according to claim
7, comprising means for carrying out a data communication by using radio waves with said
sensors, wherein said switch means has means for switching frequencies of radio waves used in
said data communication.

9. (Original) The monitor receiver in the tire monitoring system according to claim
7, wherein said transmission method information comprises at least either communication
protocol information or demodulation method information.

10. (Canceled)

11. (Previously presented) A monitor receiver in a tire monitoring system comprising:
sensors, each of which is provided for each of the tires equipped to a vehicle and
detects conditions of the tire and wirelessly sends the detected result, and

a monitor with said monitor receiver, which receives the detected result sent from
each of said sensors, for monitoring conditions of said tires on the basis of said detected
result received by the monitor receiver;

wherein said monitor receiver comprises:

a storage unit for storing more than two types of transmission method information for a data communication with said sensors; and

switch means for selecting one type of transmission method information from said stored transmission method information and setting a data communication with a transmission method on the basis of the selected transmission method information available,

wherein said switch means comprises means for selecting one type of transmission method information from said more than two types of transmission method information and setting a data communication with a transmission method based on the selected transmission method information available, individually for each of the sensors.

12. (Previously presented) A monitor receiver in a tire monitoring system comprising: sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

a monitor with said monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver;

wherein said monitor receiver comprises:

a storage unit for storing more than two types of transmission method information for a data communication with said sensors;

switch means for selecting one type of transmission method information from said stored transmission method information and setting a data communication with a transmission method on the basis of the selected transmission method information available; and

communication means for carrying out a data communication in a time sharing method with each of said sensors,

wherein said switch means comprises means for setting one of said transmission methods available individually for a transmission time for each of said time-sharing sensors.

13. (Previously presented) A monitor receiver in a tire monitoring system comprising:

sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

a monitor with said monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver;

wherein said monitor receiver comprises:

a storage unit for storing more than two types of transmission method information for a data communication with said sensors;

switch means for selecting one type of transmission method information from said stored transmission method information and setting a data communication with a transmission method on the basis of the selected transmission method information available,

wherein said switch means comprises:

a control unit for setting a data communication with a transmission method on the basis of transmission method information stored in said storage unit available;

means for receiving data sent from said sensor with any of more than two types of demodulation methods on the basis of an instruction from said control unit; and

a switch for switching said control unit to the default state when a sensor is changed,

wherein said control unit comprises means for receiving data sent from said sensor by switching said more than two demodulation methods one after the other in said default state and for setting a transmission method available by automatically determining a transmission method corresponding to said sensor on the basis of predetermined information in the received data.

14. (Original) The monitor receiver in the tire monitoring system according to claim

13,

wherein said storage unit stores information representing the type of a sensor and transmission method information in sensor's own identification information sent by the sensor in association with each other,

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wherein said control unit comprises means for automatically determining a transmission method corresponding to said sensor on the basis of sensor's identification information included in data received from said sensor.

15. (Original) The monitor receiver in the tire monitoring system according to claim 13, comprising at least two or more of amplitude modulation (AM), amplitude shift keying (ASK), frequency modulation (FM), frequency shift keying (FSK), phase modulation (PM) and phase shift keying (PSK) as said demodulation method.

16. (Original) The monitor receiver in the tire monitoring system according to claim 7, comprising means for displaying at least a part of data received from said sensor.

17. (Canceled)

18. (Canceled)

19. (Previously presented) A sensor of a tire monitoring system comprising:

sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

a monitor with a monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver,

wherein said sensors comprises:

a storage unit for storing more than two types of transmission method information for a data communication with said monitor; and

switch means for selecting one type of transmission method information from transmission method information stored in said storage unit and setting a data communication with a transmission method on the basis of the selected transmission method information available,

wherein said transmission method information comprises data transfer bit rate information and transferred data format information.

20. (Original) The sensor of the tire monitoring system according to claim 19, comprising means for carrying out a data communication with said monitor by using radio waves.

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21. (Original) The sensor of the tire monitoring system according to claim 19, wherein said transmission method information comprises at least either communication protocol information or modulation method information.

22. (Canceled)

23. (Original) The sensor of the tire monitoring system according to claim 19, comprising means for detecting an air pressure in a tire and sending the detected result.

24. (Previously presented) The monitor receiver in the tire monitoring system according to claim 7, wherein said switch means comprises means for selecting one type of transmission method information from said more than two types of transmission method information and setting a data communication with a transmission method based on the selected transmission method information available, individually for each of the sensors.

25. (Previously presented) The monitor receiver in the tire monitoring system according to claim 7, comprising communication means for carrying out a data communication in a time sharing method with each of said sensors,

wherein said switch means comprises means for setting one of said transmission methods available individually for a transmission time for each of said time-sharing sensors.

26. (Previously presented) The monitor receiver in the tire monitoring system according to claim 7, wherein said switch means comprises:

a control unit for setting a data communication with a transmission method on the basis of transmission method information stored in said storage unit available;

means for receiving data sent from said sensor with any of more than two types of demodulation methods on the basis of an instruction from said control unit; and

a switch for switching said control unit to the default state when a sensor is changed,

wherein said control unit comprises means for receiving data sent from said sensor by switching said more than two demodulation methods one after the other in said default state and for setting a transmission method available by automatically determining a transmission method corresponding to said sensor on the basis of predetermined information in the received data.

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27. (Previously presented) The monitor receiver in the tire monitoring system according to claim 26, wherein said storage unit stores information representing the type of a sensor and transmission method information in sensor's own identification information sent by the sensor in association with each other,

wherein said control unit comprises means for automatically determining a transmission method corresponding to said sensor on the basis of sensor's identification information included in data received from said sensor.

28. (Previously presented) The monitor receiver in the tire monitoring system according to claim 26, wherein, comprising at least two or more of amplitude modulation (AM), amplitude shift keying (ASK), frequency modulation (FM), frequency shift keying (FSK), phase modulation (PM) and phase shift keying (PSK) as said demodulation method.

29. (New) A monitor of a tire monitoring system comprising
sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

a monitor with a monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver,

wherein said monitor comprises a monitor receiver as in claim 7.

30. (New) The monitor of the tire monitoring system according to claim 29, comprising means for requesting from said sensor to send said detected result.

31. (New) A monitor of a tire monitoring system comprising
sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

a monitor with a monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver,

wherein said monitor comprises a monitor receiver as in claim 8.

32. (New) The monitor of the tire monitoring system according to claim 31, comprising means for requesting from said sensor to send said detected result.

33. (New) A monitor of a tire monitoring system comprising

sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

a monitor with a monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver,

wherein said monitor comprises a monitor receiver as in claim 9.

34. (New) The monitor of the tire monitoring system according to claim 33, comprising means for requesting from said sensor to send said detected result.

35. (New) A monitor of a tire monitoring system comprising

sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

a monitor with a monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver,

wherein said monitor comprises a monitor receiver as in claim 11.

36. (New) The monitor of the tire monitoring system according to claim 35, comprising means for requesting from said sensor to send said detected result.

37. (New) A monitor of a tire monitoring system comprising

sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

a monitor with a monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver,

wherein said monitor comprises a monitor receiver as in claim 12.

38. (New) The monitor of the tire monitoring system according to claim 37, comprising means for requesting from said sensor to send said detected result.

39. (New) A monitor of a tire monitoring system comprising

sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

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a monitor with a monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver,

wherein said monitor comprises a monitor receiver as in claim 13.

40. (New) The monitor of the tire monitoring system according to claim 39, comprising means for requesting from said sensor to send said detected result.

41. (New) A monitor of a tire monitoring system comprising sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

a monitor with a monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver,

wherein said monitor comprises a monitor receiver as in claim 14.

42. (New) The monitor of the tire monitoring system according to claim 41, comprising means for requesting from said sensor to send said detected result.

43. (New) A monitor of a tire monitoring system comprising sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

a monitor with a monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver,

wherein said monitor comprises a monitor receiver as in claim 15.

44. (New) The monitor of the tire monitoring system according to claim 43, comprising means for requesting from said sensor to send said detected result.

45. (New) A monitor of a tire monitoring system comprising sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

a monitor with a monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver,

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wherein said monitor comprises a monitor receiver as in claim 16.

46. (New) The monitor of the tire monitoring system according to claim 45, comprising means for requesting from said sensor to send said detected result.

47. (New) A monitor of a tire monitoring system comprising
sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

a monitor with a monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver,

wherein said monitor comprises a monitor receiver as in claim 24.

48. (New) The monitor of the tire monitoring system according to claim 47, comprising means for requesting from said sensor to send said detected result.

49. (New) A monitor of a tire monitoring system comprising
sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

a monitor with a monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver,

wherein said monitor comprises a monitor receiver as in claim 25.

50. (New) The monitor of the tire monitoring system according to claim 49, comprising means for requesting from said sensor to send said detected result.

51. (New) A monitor of a tire monitoring system comprising
sensors, each of which is provided for each of the tires equipped to a vehicle and detects conditions of the tire and wirelessly sends the detected result, and

a monitor with a monitor receiver, which receives the detected result sent from each of said sensors, for monitoring conditions of said tires on the basis of said detected result received by the monitor receiver,

wherein said monitor comprises a monitor receiver as in claim 26.

52. (New) The monitor of the tire monitoring system according to claim 51, comprising means for requesting from said sensor to send said detected result.

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53. (New) A monitor of a tire monitoring system comprising
sensors, each of which is provided for each of the tires equipped to a vehicle and
detects conditions of the tire and wirelessly sends the detected result, and
a monitor with a monitor receiver, which receives the detected result sent from
each of said sensors, for monitoring conditions of said tires on the basis of said detected
result received by the monitor receiver,
wherein said monitor comprises a monitor receiver as in claim 27.
54. (New) The monitor of the tire monitoring system according to claim 53,
comprising means for requesting from said sensor to send said detected result.
55. (New) A monitor of a tire monitoring system comprising
sensors, each of which is provided for each of the tires equipped to a vehicle and
detects conditions of the tire and wirelessly sends the detected result, and
a monitor with a monitor receiver, which receives the detected result sent from
each of said sensors, for monitoring conditions of said tires on the basis of said detected
result received by the monitor receiver,
wherein said monitor comprises a monitor receiver as in claim 28.
56. (New) The monitor of the tire monitoring system according to claim 55,
comprising means for requesting from said sensor to send said detected result.